

Amendments to the Claims:

Please amend Claims 11 and 27 as indicated in the following listing of claims, which replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. – 10. (Canceled)

11. (Currently Amended) An improved vascular catheter of the type including (a) a tubular catheter body having a proximal tubular portion, a distal tubular portion, and a single primary lumen therethrough, and (b) a drive cable having a cable body and a cable lumen rotatably received in the primary lumen, with a lead wire disposed in the cable lumen, wherein the improvement comprises an intermediate tubular portion formed on the tubular catheter body of a transitional material between the proximal tubular portion and the distal tubular portion, the transitional material being of a higher flexural modulus than the distal tubular portion and of a lower flexural modulus than the proximal tubular portion, and a strain relief device coupled to a portion of the drive cable to provide strain relief to the lead wire when the lead wire is subjected to a tensile load.

12. (Previously Presented) The improved vascular catheter of claim 11, wherein the proximal tubular portion comprises a material taken from the group consisting of natural polymers, synthetic polymers, and plastic materials.

13. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion comprises a material taken from the group consisting of nylons, polyester, polyimides, polyolefins, and blends of such materials.

14. – 17. (Canceled)

18. (Previously Presented) The improved vascular catheter of claim 11, wherein the proximal tubular portion comprises a material taken from the group consisting of silicone rubber, natural rubber, polyvinylchloride, polyurethanes, polyesters, polyethylene, polytetrafluoroethylene (PTFE), and polyetheretherketone (PEEK).

19. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion is adhesively bonded with the proximal tubular portion and with the distal tubular portion.

20. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion is thermally bonded with the proximal tubular portion and with the distal tubular portion.

21. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion has a length between 20 and 200 mm.

22. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion has a length between 40 and 100 mm.

23. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion is connected with the distal tubular portion at a point between about 100 and 400 mm from a distal end of the tubular catheter body.

24. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion is connected with the distal tubular portion at a point approximately 150 mm from a distal end of the tubular catheter body.

25. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion has a flexural modulus between 50 and 220 kpsi.

26. (Previously Presented) The improved vascular catheter of claim 11, wherein the intermediate tubular portion has a flexural modulus between 150 and 190 kpsi.

27. (Currently Amended) A vascular catheter comprising:
a tubular catheter body having a proximal tubular portion, an intermediate tubular portion, a distal tubular portion, and a single primary lumen therethrough, wherein the intermediate tubular portion is formed on the tubular catheter body of a transitional material between the proximal tubular portion and the distal tubular portion, the transitional material being of a higher flexural modulus than the distal tubular portion and of a lower flexural modulus than the proximal tubular portion; **and**
a drive cable having a cable body and a cable lumen rotatably received in the primary lumen, with a lead wire disposed in the cable lumen; and
a strain relief device coupled to a portion of the drive cable to provide strain relief to the lead wire when the lead wire is subjected to a tensile load.

28. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion has a flexural modulus between 50 and 220 kpsi.

29. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion has a flexural modulus between 150 and 190 kpsi.

30. (Previously Presented) The vascular catheter of claim 27, wherein the proximal tubular portion comprises a material taken from the group consisting of natural polymers, synthetic polymers, and plastic materials.

31. (Previously Presented) The vascular catheter of claim 27, wherein the proximal tubular portion comprises a material taken from the group consisting of silicone rubber,

natural rubber, polyvinylchloride, polyurethanes, polyesters, polyethylene, polytetrafluoroethylene (PTFE), and polyetheretherketone (PEEK).

32. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion comprises a material taken from the group consisting of nylons, polyester, polyimides, polyolefins, and blends of such materials.

33. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion is adhesively bonded with the proximal tubular portion and with the distal tubular portion.

34. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion is thermally bonded with the proximal tubular portion and with the distal tubular portion.

35. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion has a length between 20 and 200 mm.

36. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion has a length between 40 and 100 mm.

37. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion is connected with the distal tubular portion at a point between about 100 and 400 mm from a distal end of the tubular catheter body.

38. (Previously Presented) The vascular catheter of claim 27, wherein the intermediate tubular portion is connected with the distal tubular portion at a point approximately 150 mm from a distal end of the tubular catheter body.